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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/593,220 | 09/18/2006 | Masanori Hashiba | 2418.99US01 | 7045 |
| 7590 01/29/2010 | | | | |
| Douglas J Christensen Patterson Thuent Skaar & Christensen 4800 IDS Center 80 South 8th Street Minneapolis, MN 55402 | | | | |
| EXAMINER | | | | |
| BLADES, JOHN A | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1791 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/593,220

Applicant(s)

HASHIBA ET AL.

Examiner

JOHN BLADES

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 & 5-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/22)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 11/18/09

DETAILED ACTION

Claims 1-3 & 5-6 are pending as amended on 10/08/09.

Response to Amendment

1. This final action is a response to the amendment filed on October 08, 2009. Claim 4 has been cancelled and thus all rejections pertaining to this claim are withdrawn. Claims 1-3 have been amended as a result of the previous non-final action, rendering previous rejections to these claims moot. Claims 5-6 have been added.

Information Disclosure Statement

2. The information disclosure statement filed on 11/18/09 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered. No Form PTO-1449 has been received; only Attorney's accompanying cover letter is on file.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 5** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The ambiguous wording of this claim must be appropriately rewritten to define any added limitation(s) in more definite language, particularly the phrase "...*the desired period of time is...*"

Claim Rejections - 35 USC § 103

5. **Claims 1-3 & 5-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mukai et al.*, JP 09-169897 in view of *Bopp et al.*, US 2003/0038405 and further in view of *Kashiwai et al.*, JP 2001-303489.
6. Mukai teaches the compression molding of aliphatic polyester fibers (such as PLA, [0010]) with woody fibers, forming a molded product with high heat strength and minimal environmental load; this molding occurs at a temperature above the melting point of the resin (throughout, see abstract). Mukai does not expressly disclose the use of an *inorganic* filler (such as talc), or *holding the product at or near a certain temperature to crystallize the polylactic acid*. However, Bopp teaches the incorporation of a nucleation agent – i.e. talc @ about 0.1+ wt% – as filler in PLA material, in order to promote crystallization when molding this material near its crystallization temperature (throughout, e.g. [0012, 0032]). It would have been obvious to one of ordinary skill in

the art at the time of the instant invention to combine the teachings of Bopp with the method of Mukai, to increase the heat resistance of the molded article [0002-0003].

7. Though Mukai & Bopp do not teach preparation of base material *in a ratio of wood:polymer that ranges from 7:3 to 5:5 by weight*, Kashiwai teaches a 6:4 to 4:6 wood:polymer range (abstract) for combining these ingredients that is similar to the claimed range with substantial overlap. It would have been obvious to one of ordinary skill in the art at the time the invention was made to practice the process of Mukai & Bopp with the teachings of Kashiwai. The rationale to do so would have been that this would predictably result in a molded product that corresponds to an appropriate density or cost of materials. Further, it has been held that where claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. See MPEP 2144.05(I). The method described above would inherently reach complete crystallization in the desired time frame.

Response to Arguments

8. Applicant's arguments, see response, "Remarks," filed October 08, 2009, with respect to the rejection of claims 1-4 have been fully considered and are not persuasive. Though a submission was mentioned in Applicant's remarks, no English translation/declaration for the documents to which foreign priority is being claimed has been received. However the amendments to the claims have rendered previous rejections moot.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN BLADES whose telephone number is (571)270-7661. The examiner can normally be reached on M-Th (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katarzyna Wyrozebski can be reached on (571)272-1127. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.B./
Patent Examiner

/KHANH NGUYEN/
Primary Examiner, Art Unit 1791